

WHAT IS CLAIMED IS:

1. A channel decision method in a radio communication system adapted to decide a channel to be employed for communication out of a plurality of radio frequency channels, and to cause communication to be made between one radio station and the other radio station, said channel decision method
5 comprising:
 - a first step of making decision of said channel at a certain timing in said one radio station; and
 - a second step of notifying information relating to this decided channel to said other radio station.
2. The channel decision method according to claim 1, wherein said timing is a timing based on a predetermined constant period or a timing based on a variable period.
3. The channel decision method according to claim 1, wherein decision of said channel is adapted to be made at random from among a plurality of the channels.
4. The channel decision method according to claim 1, said channel decision method further comprising a third step of acquiring information indicating each communication quality of said plurality of said channels to store it; and
5 decision of the channel in said first step is adapted to be made based on said quality.
5. The channel decision method according to claim 1, said channel decision method further comprising a third step of storing information indicating each communication quality of said plurality of said channels, and information indicating an acquisition time of each quality thereof; and

5 decision of the channel in said first step is adapted to be made based on at least one of each quality of said plurality of said channels, and this acquisition time of quality information.

6. The channel decision method according to claim 1, wherein the channel having less interference is decided in said first step.

7. The channel decision method according to claim 5, wherein the channel having the oldest acquisition time of this quality is decided in said first step.

8. The channel decision method according to claim 5, said channel decision method characterized in that, out of the channels of which said quality is superior to a predetermined threshold, the channel having the oldest acquisition time of this quality is decided in said first step.

9. The channel decision method according to 5, said channel decision method characterized in further including a fourth step of, whenever said first step is completed, updating at least one of said quality and said acquisition time.

10. The channel decision method according to claim 4, wherein quality of all channels to be stored in said third step is initialized to a value between a value indicating a state of the most excellent quality and a value indicating an allowable limit of quality.

11. The channel decision method according to claim 5, wherein quality of all channels to be stored in said third step is initialized to a value between a value indicating a state of the most excellent quality and a value indicating an allowable limit of quality.

12. The channel decision method according to claim 4, wherein said quality is a rate of (the number of times a channel switch was judged to be made due to interference) to (the number of times the channel was decided).

13. The channel decision method according to claim 5, wherein said quality is a rate of (the number of times a channel switch was judged to be made due to interference) to (the number of times the channel was decided).

14. A channel decision method in a radio communication system adapted to decide a channel to be employed for communication out of a plurality of radio frequency channels, and to cause communication to be made between one radio station and the other radio station, said channel decision method
5 comprising:

a first step of employing either a periodic timing or a timing based on detection of interference, or both thereof to make decision of said channel in said one radio station; and

a second step of notifying information relating to this decided channel
10 to said other radio station.

15. The channel decision method according to claim 14, wherein said timing is a timing based on a predetermined constant period or a timing based on a variable period.

16. The channel decision method according to claim 14, wherein decision of said channel is adapted to be made at random from among a plurality of the channels.

17. The channel decision method according to claim 14, said channel decision method further comprising a third step of acquiring information indicating each communication quality of said plurality of said channels to store it; and
5 decision of the channel in said first step is adapted to be made based on said quality.

18. The channel decision method according to claim 14, said channel decision method further comprising a third step of storing information indicating each communication quality of said plurality of said channels, and information indicating an acquisition time of each quality thereof; and
- 5 decision of the channel in said first step is adapted to be made based on at least one of each quality of said plurality of said channels, and this acquisition time of quality information.
19. The channel decision method according to claim 14, wherein the channel having less interference is decided in said first step.
20. The channel decision method according to claim 18, wherein the channel having the oldest acquisition time of this quality is decided in said first step.
21. The channel decision method according to claim 18, said channel decision method characterized in that, out of the channels of which said quality is superior to a predetermined threshold, the channel having the oldest acquisition time of this quality is decided in said first step.
22. The channel decision method according to 18, said channel decision method characterized in further including a fourth step of, whenever said first step is completed, updating at least one of said quality and said acquisition time.
23. The channel decision method according to claim 17, wherein quality of all channels to be stored in said third step is initialized to a value between a value indicating a state of the most excellent quality and a value indicating an allowable limit of quality.

24. The channel decision method according to claim 18, wherein quality of all channels to be stored in said third step is initialized to a value between a value indicating a state of the most excellent quality and a value indicating an allowable limit of quality.
25. The channel decision method according to claim 17, wherein said quality is a rate of (the number of times a channel switch was judged to be made due to interference) to (the number of times the channel was decided).
26. The channel decision method according to claim 18, wherein said quality is a rate of (the number of times a channel switch was judged to be made due to interference) to (the number of times the channel was decided).
27. A radio station for deciding a channel to be employed for communication with the other radio station out of a plurality of radio frequency channels, said radio station comprising:
channel decision means for making decision of said channel at a certain
5 timing; and
means for notifying information relating to this decided channel to said other radio station.
28. The radio station according to one of claim 27, wherein said timing is a timing based on a predetermined constant period or a timing based on a variable period.
29. The radio station according to claim 27, wherein said channel decision means is adapted to make decision of said channel at random from among a plurality of the channels.
30. The radio station according to claim 27, said radio station further comprising a storage for acquiring information indicating each communication quality of said plurality of said channels to store it; and

5 said channel decision means is adapted to make decision of said
channel based on said quality.

31. The radio station according to claim 27, said radio station further
 comprising a storage for storing information indicating each
communication quality of said plurality of said channels, and information indicating
an acquisition time of each quality thereof; and

5 said channel decision means is adapted to make decision of said
channel based on at least one of each quality of said plurality of said channels, and the
acquisition time of this quality information.

32. The radio station according to claim 27, wherein said channel decision
 means decides the channel having less interference.

33. The radio station according to claim 31, said radio station characterized
 in that said channel decision means decides the channel having the
oldest acquisition time of this quality.

34. The radio station according to claim 31, said radio station characterized
 in that, out of the channels of which said quality is superior to a
predetermined threshold, said channel decision means decides the channel having the
oldest acquisition time of this quality.

35. The radio station according to claim 30, said radio station further
 comprising updating means for, whenever decision of the channel is
completed by said channel decision means, updating a quality.

36. The radio station according to claim 31, said radio station characterized
 further comprising updating means for, whenever decision of the
channel is completed by said channel decision means, updating at least one of a
quality and a acquisition time.

37. The radio station according to claim 30, wherein quality of all channels to be stored in said storage means is initialized to a value between a value indicating a state of the most excellent quality and a value indicating an allowable limit of quality.

38. The radio station according to claim 31, wherein quality of all channels to be stored in said storage means is initialized to a value between a value indicating a state of the most excellent quality and a value indicating an allowable limit of quality.

39. The radio station according to claim 30, wherein said quality is a rate (of the number of times a channel switch was judged to be made due to interference) to (the number of times the channel was decided).

40. The radio station according to claim 31, wherein said quality is a rate (of the number of times a channel switch was judged to be made due to interference) to (the number of times the channel was decided).

41. A radio station for deciding a channel to be employed for communication with the other radio station out of a plurality of radio frequency channels, said radio station comprising:

5 channel decision means for employing either a periodic timing or a timing based on detection of interference, or both thereof to make decision of said channel; and

means for notifying information relating to this decided channel to said other radio station.

42. The radio station according to one of claim 41, wherein said timing is a timing based on a predetermined constant period or a timing based on a variable period.

43. The radio station according to claim 41, wherein said channel decision means is adapted to make decision of said channel at random from among a plurality of the channels.

44. The radio station according to claim 41, said radio station further comprising a storage for acquiring information indicating each communication quality of said plurality of said channels to store it; and said channel decision means is adapted to make decision of said
5 channel based on said quality.

45. The radio station according to claim 41, said radio station further comprising a storage for storing information indicating each communication quality of said plurality of said channels, and information indicating an acquisition time of each quality thereof; and
5 said channel decision means is adapted to make decision of said channel based on at least one of each quality of said plurality of said channels, and the acquisition time of this quality information.

46. The radio station according to one of claim 41, wherein said channel decision means decides the channel having less interference.

47. The radio station according to claim 45, said radio station characterized in that said channel decision means decides the channel having the oldest acquisition time of this quality.

48. The radio station according to claim 45, said radio station characterized in that, out of the channels of which said quality is superior to a predetermined threshold, said channel decision means decides the channel having the oldest acquisition time of this quality.

49. The radio station according to claim 44, said radio station further comprising updating means for, whenever decision of the channel is completed by said channel decision means, updating a quality.

50. The radio station according to claim 45, said radio station characterized further comprising updating means for, whenever decision of the channel is completed by said channel decision means, updating at least one of a quality and a acquisition time.

51. The radio station according to claim 44, wherein quality of all channels to be stored in said storage means is initialized to a value between a value indicating a state of the most excellent quality and a value indicating an allowable limit of quality.

52. The radio station according to claim 45, wherein quality of all channels to be stored in said storage means is initialized to a value between a value indicating a state of the most excellent quality and a value indicating an allowable limit of quality.

53. The radio station according to claim 44, wherein said quality is a rate (of the number of times a channel switch was judged to be made due to interference) to (the number of times the channel was decided).

54. The radio station according to claim 45, wherein said quality is a rate (of the number of times a channel switch was judged to be made due to interference) to (the number of times the channel was decided).

55. A radio terminal comprising means for receiving information relating to a channel to be employed for communication that was decided at a certain timing from among a plurality of radio frequency channels in a radio station to employ the channel to be included in this information for communicating with said
5 radio station.

56. A computer-readable program for causing a computer to execute an operation of a radio station adapted to decide a channel to be employed for communicating with the other radio station from among a plurality of radio frequency channels, said program comprising the steps of:

- 5 making decision of said channel at a certain timing; and
 notifying information relating to this decided channel to said other radio station.

57. A computer-readable program for causing a computer to execute an operation of a radio station adapted to decide a channel to be employed for communicating with the other radio station from among a plurality of radio frequency channels, said program comprising the steps of:

- 5 employing either a periodic timing or a timing based on detection of interference, or both thereof to make decision of said channel; and
 notifying information relating to this decided channel to said other radio station.